

## ON THE AUSTRALIAN LONCHAEIDAE (DIPTERA.)

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Very little is known about Australian Lonchaeidae. In my paper of 1920 (Bull. Ent. Res., xi., p. 204-210) I recorded only two species, viz.: *Loucheaea aurea* Macq. and *L. citricola* Bezzi. Among some material received through the courtesy of Dr. E. W. Ferguson and Mr. G. F. Hill I have found two additional new species, thus bringing the total number to four. Three subgenera are represented, and it is probable that many other species will be found in the future.

The species before me can be distinguished as follows:—

1 (6). Arista bare or microscopically pubescent; only one sternopleural bristle; squamulae white, pale fringed.

2 (5). Metallic species of a golden-green colour, with short antennae and with broad peristomialia; praetarsi of all the legs broadly yellowish at base; wings shorter than the body, with the first posterior cell narrowed at end, and with the sixth vein not distinctly prolonged to the hind border (subgen. *Lamprolonchaea*).

3 (4). Frons black, opaque, quite smooth or with two less distinct longitudinal furrows; last abdominal segment of the male semi-circular and not fringed . . . . . *aurea*, Macq.

4 (3). Frons bluish, rather shining, deeply rugose; last abdominal segment of male elongate-triangular and black fringed at hind border . . . *rugosifrons*, sp. nov.

5 (2). Non-metallic species of a bluish-black colour, with long antennae, and narrow peristomialia; all the praetarsi black; wings as long as the body, with the first posterior cell not narrowed at end, with the sixth vein prolonged to the hind border (Subg. *Loucheaea*). . . . . *choreoides*, sp. nov.

6 (1). Arista plumose; two sternopleural bristles; antennae long; peristomialia narrow; praetarsi black; squamulae dark, black fringed (Subgen. *Carpouloucheaea*). . . . . *citricola*, Bezzi.

1. *Lamprolonchaea aurea*, Macquart 1851 = *splendida*, Loew 1873 = *metatarsata*,<sup>\*</sup> Kertész 1901. This widely spread species (Mediterranean subregion and whole Ethiopian and Indo-Australian Regions) is said to be frequent in Australia, New Zealand and Pacific Islands; but probably it has been in part confounded with the following one. I have before me a specimen from Eidsvold (*Bancroft*).

2. *Lamprolonchaea rugosifrons*, sp. nov. Closely allied with the preceding species, but at once distinguishable by its greater size and by the very different frons in both sexes.

This is the second species of the subgen. *Lamprolonchaea* to be recognised. *L. browniana* Bezzi, 1919, being probably the same as *aurea*; it is possible that the present new species figures in some collection under the name of *splendida*.

<sup>\*</sup>Becker has described under this same name a very different species from South America (Miss. Arc. merid., Paris, 1919, x., 2, p. 188).

Type ♂ and type ♀ and some additional specimens of both sexes in the Health Department Collection at Sydney, New South Wales, from Sydney, December-January, 1920-1923 (*E. W. Ferguson*); Mt. Gambier, South Australia, December, 1920 (*Mr. Campbell*); Linga, North Western Victoria, October, 1922 (*F. E. Wilson*).

Length of body, 3.5-4 mm.; of wing, 3-3.5 mm.

A metallic shining species of a very brilliant, golden-green colour, except the head, which is black, somewhat bluish on the frons. Occiput entirely opacous, with a faint dark grey dust. Frons of the male narrow, only half as broad as one eye,  $2\frac{1}{2}$  times longer than broad; in the female it is almost twice as broad as in the male, only a little narrower than one eye;  $1\frac{1}{2}$  times longer than broad; it is shining black, with greenish or bluish reflections, and is deeply punctate, with broad impressed points, appearing thus very rugose. The small lunula is black or reddish-brown, white shining. Eyes oval, more developed in the male than in the female, unicolored, bare. Antennae inserted at middle of the eyes, broadly separated at base and diverging, being separated by a broad, flat, middle keel, which is more developed than in *aurea*; they are shorter than the face, the third joint being only  $1\frac{1}{2}$  times longer than the first two joints together; they are entirely black, the third joint a little whitish dusted; arista bare. Faece entirely black, opacous, dark grey dusted on the antennal furrows, which are shining below; the middle keel is broad and complete, white shining in certain light. Parafacialia linear, white shining; peristomialia broad, broader than the third antennal joint, shining black and rugose, but less deeply and less irregularly than the frons. Palpi and proboscis black. All the bristles and hairs black; frontal hairs rather long and dense; vertical bristles of about the same length and rather short; occipital long; only one pair of orbital bristles, the superior one, curved behind. Thorax and scutellum entirely shining, quite devoid of dust; the rather long hairs of back and pleurae are black, like the bristles; two pairs of long dorso-central, with some other shorter in front; 3-4 mesopleural, 1 sternopleural. Scutellum with four bristles and with only a few hairs between them. Squamae whitish and white fringed; halteres black. Abdomen glistening and coloured like the mesonotum, with golden and cupreous reflections; it has rather long black hairs, chiefly at sides, but no bristles; the terminal segment in the male is about twice as long as the preceding one, triangular and fringed with long hairs at sides, almost divided in two tufts. Venter opacous black in both sexes; male genitalia black; basal segment of the ovipositor short and broad, black. Legs black, with the basal joint of all the tarsi reddish with a narrow black end; the four anterior femora are fringed with long and dense black hairs, chiefly in the male. Wings hyaline, iridescent, with a distinct whitish tint; all the veins are pale yellowish; costal cells dilated; second vein straight; third and fourth straight and distinctly, even if little, converging towards the end, the third ending a little before the tip of wing; costa ending at fourth vein; small cross-vein placed beyond the middle of the discoidal cell; hind cross-vein straight and perpendicular, more than twice as long as the last portion of fifth vein; first posterior cell narrower than the terminal half of the discoidal cell; sixth vein shorter than the distance between its end and hind border of wing.

3. *Lonchaea choreoides*, sp. nov. Very like the European *chorea* Fall; but distinguishable by the very different form of head and by the much broader frons in both sexes.

Type ♂ and ♀, a single couple of specimens in the Health Department Collection from Sydney, March, 1922 (*Dr. E. W. Ferguson*).

Length of body and wing, 4 mm. An entirely shining bluish-black species. Head distinctly broader than the thorax, in front view more broad than high.

but compressed in lateral view (in *chorca* the head is not broader than the thorax, and is moreover about as high as broad). Occiput black, shining above and near the eyes-border. Frons of about equal breadth in both the sexes, nearly subquadrate, being only a little longer than broad; it is black, silky, with shining ocellar and vertical plates; in front of the ocellar plate there is a broad but faint transverse furrow. Lunula semicircular, black, whitish shining. Eyes rather compressed, bare. Face broad and flat, entirely black, whitish dusted, with no distinct middle keel; parafacialia linear; peristomialia more narrow than the third antennal joint, black, opacous, smooth. Antennae inserted distinctly above the middle of eyes, separated at base, a little longer than the face; third joint about three times as long as the two basal joints together; they are black, the third joint grey dusted; arista bare, as long as the whole antenna. Palpi and proboscis black. Hairs and bristles black; frontal hairs dense; one superior orbital. Thorax and scutellum shining bluish-black, not dusted; hairs long and black; bristles long and black; two strong dorsocentral; several mesopleural but only one isternopleural; four scutellar, and between them rather numerous hairs. Squamae yellowish (not white as in *chorca*), with whitish fringe; halteres black. Abdomen shining bluish-black, black haired; venter opacous black; ovipositor black. Legs entirely black, even on all the tarsi; hairs black; front femora fringed in the male. Wings long, hyaline, with a faint whitish tint; veins yellowish. Costal cells not much dilated; second vein straight; third vein curved below at end, ending at wing-tip; small cross-vein near the middle of the discoidal cell; first posterior cell broad; hind cross-vein straight, perpendicular, much longer than the portion of fifth vein beyond it; sixth vein with distinct spurious continuation to the hind border, curved in the middle. Costa ending at fourth vein; axillary cell very broad.

4. *Carpalanchaea citricola* Bezzi, 1913. One male specimen from Townsville, Queensland, "bred from fruit-fly larvae" (F. H. Taylor). Already found in Australia (Port Darwin), by Mr. G. F. Hill.

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